

Claims

1. Process for the melt spinning of PES microfilaments with a titre of not more than 0.7 dtex,
characterised in that
the microfilaments are spun from the melt of a polyester with reduced relative solution viscosity compared with PES fibre spinning grades with relative solution viscosities of between 1.60 and 1.65 as a function of their titre.
2. Process according to claim 1,
characterised in that
the polyester melt is polyethylene terephthalate.
3. Process according to claim 1 or 2,
characterised in that
the titres of the microfilaments are spun from polyterephthalate melts of which the reduced relative solution viscosity is determined according to the formula
$$\eta_{\text{rel}} = (0.1052 \times \ln X) + 1.649,$$
where X is the DTY titre in dtex,
wherein the spinning speed is 2500 m/min \pm 10%,
wherein the spin performance of defined filament titres can be realised with a breadth of fluctuation of relative solution viscosity of \pm 0.05.
4. Process according to claim 2 or 3,

characterised in that the reduced relative solution viscosity of the polyethylene terephthalate melt is adjusted by adding and homogeneously mixing in at least one viscosity-regulating additive.

5. Process according to claim 4,
characterised in that the additive is selected from the group comprising aliphatic diols and water.
6. Process according to claim 5,
characterised in that the aliphatic diol is selected from the group comprising triethylene glycol, diethylene glycol and ethylene glycol.
7. Process according to claim 1,
characterised in that filaments with titres from 0.1 to 0.7 dtex are spun.
8. Process according to claim 7,
characterised in that filaments with titres from 0.1 to 0.35 dtex are spun.
9. Process according to claim 7,
characterised in that filaments with titres from 0.1 to 0.2 dtex are spun.
10. Polyester microfilaments with a titre of not more than 0.7 dtex,
manufactured according to any of claims 1 to 9,
characterised in that they have a dyeing uniformity value according to grey scale from 4.0 to 5.0 and a delta E value of less than 1.0.